

REMARKS

Claims 1-18 are pending in the application. Claims 16-18 are found to be allowed and claims 2-4, 6-8, 10-11, 13-15 are found to contain allowable subject matter.

Claim 12 is rejected under the judicially created doctrine of obviousness type double patenting over claims 2-4 of U.S. patent 5,734,654.

U.S. patent 5,734,654 describes a frame relay switching apparatus in a frame relay network in which correspondence between a frame identifier and priority information concerning frame discarding are stored in a storage means in advance. The frames to be transmitted are temporarily stored in a transmitting buffer.

When the frame relay switching apparatus receives a frame while the transmitting buffer is in a congested state, the frame relay switching apparatus discards both the received frame and all such frames stored in the transmitting buffer having the same identifier as that of the received frame if the priority of the received frame is low.

The frame relay switching apparatus discards all the frames of low priority stored in the transmitting buffer if the priority of the received frame is high.

However in contrast applicant's claim 12 recites that:

From the foregoing, claims 2-4 of U.S. 5,734,654 does not comprise the characteristic components of claim 12 of the present invention, that are:

a storage unit for storing an identifier of a frame that has been transmitted to the destination terminal; and

a redundant-frame filter for determining whether the frame identifier of a frame newly received from a path has been stored in said storage unit, discarding the received frame if

the received frame is the frame that has already received, and transmitting the received frame to the destination terminal and storing the identifier of the received frame in said storage unit if the received frame is not the frame that has been already been received.

In addition, unlike claims 2-4 of U.S. 5,734,654, claim 12 of the present invention does not execute control of the frame discarding based upon the priority level.

From the foregoing, claim 12 is allowable.

Ganesan relates to a multimedia frame relay codec. In this codec, when receiving a frame from a frame relay network, a frame relay processor receives the frame and judges media type (voice data or facsimile data or video data) of frame data by reference to a multimedia application header of a received frame. Then the frame relay processor inputs the received frame data to a digital signal processor (DSP) corresponding to the discriminated media type. The DSP processes the frame data and inputs a result of the processing to a line interface unit (a voice line interface unit, facsimile line interface unit and video line interface unit) corresponding to the discriminated media type.

When sending a frame to the frame relay network, the line interface units input data to the corresponding DSP. The DSP processes the received data and generates a packet and inputs it to the frame relay processor, then the frame relay processor create a frame using the packets and transmits it to the frame relay network.

Unlike the claimed invention, the multimedia frame relay codec of Ganesan does not send voice data to a destination from a plurality of paths in parallel. That is, the multimedia frame relay codec according to Ganesan, does not comprise characteristic component of claim 1 that is;

a frame transmitting unit for sending the received frame to a plurality of paths in parallel in the direction of a destination if the application is a real-time application.

In addition, the multimedia frame relay codec according to Ganesan, does not comprise characteristic component of claim 5 that is;

a frame transmitting unit for sending the received frame to a plurality of paths in parallel in the direction of a destination if the type of an application is a predetermined type.

From the foregoing, claims 1 and 5 are allowable.

According to Saito, if destinations of frames F1, F2 are identical, a sending router 10 creates a concatenation frame (multiplied frame) by concatenating frames F1, F2 as shown in Fig. 9 and sends it to a destination router 20 by way of a single path as shown in Fig. 17. The destination router 20 divide concatenation frame into frames F1, F2 as shown in Fig. 10 and sends each frame to each of destination devices 90.95. In addition, according to Saito, in a case where the amount of the data signal is large, the sending router 10 sends the data signal by way of plural paths as shown in Fig. 19. That is, frame is frame F1 is transmitted by way of one path from the information processor 60 to the information processor 90 and frame F2 is transmitted by way of another path from the information processor 65 to the information processor 95.

Unlike the claimed invention, Saito does not disclose a characteristic component of claim 9 that is;

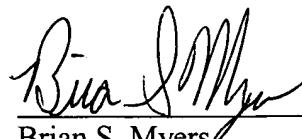
a frame transmitting unit for sending the received frame to a plurality of paths in parallel in the direction of a destination if the addresses match.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider

this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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